



For each chunk within a log, an average time gap value and standard deviation is calculated by adding together all of the time gaps (x) and dividing by the number of requests (n) during that 30 minute chunk:

Average:

$$\bar{x} = \frac{(\sum x)}{n}$$

Standard Deviation:

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$$

Time segments are determined by successively comparing the average time gaps of adjacent chunks. For example, beginning at chunk #1, the average from chunk #1 is compared to the average of chunk #2. If the average of chunk #2 is within 2 standard deviations (+ or -) of the average of chunk #1, then the chunk #2 and chunk #1 are considered to be within the same time segment. The procedure is then followed for the comparison of chunk #2 and chunk #3 and for other successive chunks within the log.

After all time segments have been determined, the process in step **600** returns to the original data used to calculate the chunk time gap averages and standard